

### 11.5.1 General

Revise the 3<sup>rd</sup> Paragraph as follows:

Earth retaining structures shall be designed for a service life based on consideration of the potential long-term effects of material deterioration, seepage, stray currents and other potentially deleterious environmental factors on each of the material components comprising the structure. For most applications, permanent retaining walls should be designed for a minimum service life of 75 years. Retaining wall applications defined as temporary shall be considered to have a service life of 5 years ~~36 months~~ or less.

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**11.5.6 Resistance Factors**

Revise the 1<sup>st</sup> and 2<sup>nd</sup> Paragraph as follows:

Resistance factors for geotechnical design of foundations are specified in Tables 10.5.5.2.2-1 through ~~10.5.5.3~~, 10.5.5.2.4-1, and Table 1.

If methods other than those prescribed in these Specifications are used to estimate resistance, the resistance factors chosen shall provide the same reliability as those given in Tables 10.5.5.2.2-1 through ~~10.5.5.3~~ 10.5.5.2.4-1, and ~~Table 1~~.

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#### 11.6.1.5.2 Wingwalls

Revise as follows:

Reinforcing bars or suitable rolled sections shall be spaced across the junction between wingwalls and abutments to tie them together. Such bars shall extend into the ~~concrete masonry~~ on each side of the joint far enough to develop the strength of the bar as specified for bar reinforcement, and shall vary in length so as to avoid planes of weakness in the concrete at their ends. If bars are not used, an expansion joint shall be provided and the wingwall shall be keyed into the body of the abutment.

#### 11.6.1.6 Expansion and Contraction Joints

Revise as follows:

~~Weakened plane~~ ~~Contraction~~ joints ~~should~~ ~~shall~~ be provided at intervals not exceeding ~~24.0~~ ~~30.0~~ ft. and expansion joints at intervals not exceeding 90.0 ft. for conventional retaining walls and abutments. All joints shall be filled with approved filling material to ensure the function of the joint. Joints in abutments shall be located approximately midway between the longitudinal members bearing on the abutments.

#### 11.6.2.1 Abutments

Revise as follows:

The provisions of Articles ~~10.6.2, 10.7.2, 10.8.2~~ ~~10.6.2.4, 10.6.2.5, 10.7.2.3 through 10.7.2.5, 10.8.2.2~~ ~~through 10.8.2.4~~, and 11.5.2 shall apply as applicable.

#### C11.6.2.2

Revise as follows:

For a conventional reinforced concrete retaining wall, experience suggests that differential wall settlements exceeding ~~on the order of~~ 1 in 500 ~~to 1 in~~ ~~4,000~~ may overstress the wall.

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